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ABSTRACT

Upgrading education requires a systematic effort to resolve its problems, expand its impact, and improve its quality by (1) acquiring commitment, (2) determining the present status, (3) setting goals and establishing a plan, (4) executing the plan, and (5) monitoring and evaluating progress. In Pakistan, a national commitment is needed to solve the problems of primary education. In all districts, school mapping and current pupil participation studies should be conducted followed by a planning exercise to provide guidelines and a sequence for completion of specific school projects. This would culminate in a national plan for the systematic development of primary education. Evaluation (via the Gross Product of Education) of the goals for primary education should be considered in the context of total education development. Spending more money will not provide measurable improvements in pupil attendance, but solutions to educational problems can be provided through empirical research such as that conducted in 1976-77 in the areas of female education and pupil attendance, participatory planning, village attitudes and environments, education management and supervision, learning environments, teacher personnel, and school buildings. Future research in these areas should focus on how best to channel resources to fulfill district plans, adult education, school health programs, and the more effective use of staff. (SB)

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STRATEGY FOR UPGRADING PRIMARY EDUCATION IN PAKISTAN

A STRATEGY FOR UPGRADING PRIMARY EDUCATION IN PAKISTAN

by

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BUREAU OF EDUCATIONAL PLANNING
MINISTRY OF EDUCATION
GOVERNMENT OF PAKISTAN

APRIL, 1977

A C K N O W L E D G M E N T S

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Dr. Jefferson N. Eastmond

Islamabad

April, 1977

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I. A SUCCESSFUL BEGINNING: NATIONAL COMMITMENT

There are many problems related to primary education in Pakistan. The solution to these problems begins with one factor: national commitment. With a national commitment, that is, the government's priority effort, most of the problems will be rather easily resolved. Without such commitment, the vast system of primary schools of the country—particularly for the rural, poor, and female populations—will continue to stumble along haltingly.

This desired commitment on the part of the government must be evidenced by more than speeches by national leaders and by more than empty targets of achievement that fail to obtain the encumbrance of sufficient resources to assure their achievement.

Historically, Pakistan has not demonstrated a keen interest in the promotion of primary education, particularly for the low socio-economic, the rural, and the female populations. Even the very low budget allocations for primary schools have sometimes had portions transferred to other functions or to higher levels of education.[1]

Other evidence of Pakistan's low commitment to education may be seen from the amount of the country's economic resources devoted to it. At present, the financial allocation to education is only 1.8 percent of the Gross National Product. This is among the lowest of such allocations of all countries in the world.

New development plans come into existence and political leaders avow in their speeches that education will receive a new emphasis, a high priority, and assured improvements in those areas which need it most. Nevertheless,

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[1] Paul O. Farrell, Thought on the Present State and Future Development of Primary Education in Pakistan (Islamabad: USAID, Mimeographed, March, 1977) pp 24.

the actual budget allocations appear to be meager and unrealistic to achieve the objectives of primary education, according to some government officials and foreign observers. This is particularly apparent when consideration is made for inflationary trends, and realistic estimates of auxillary or related costs required for expansion and needed improvement in quality.

While it therefore appears that a firm commitment to improve dramatically primary education is still lacking, there continues to be hope that present verbal assurances can somehow be fulfilled and strengthened. Moreover, the obvious fact remains that if a village, district, or province genuinely takes a commitment to develop its primary education, it can do so and, in the author's judgment, without extraordinary sacrifices. The materials, manpower, and technical assistance needed are generally available. The really dramatic improvement can be made simply by making existing schools more efficient, and this nearly always requires virtually no additional resources. What it does require, however, is local interest, positive attitudes, the will to make the improvement—in a word: commitment.

II. CONFIRMING PRESENT STATUS WITH A DISTRICT-WIDE SCHOOL MAPPING - PUPIL PARTICIPATION STUDY

From the nationwide sampling of more than 400 villages, estimates were made as to the levels of participation--percentages of youngsters attending--in the rural primary schools of Pakistan. Such calculations were made for each village and inferred for the district and provinces. Nationally, it was estimated that about 45 percent of the boys and 25 percent of the girls of the primary school age groups were attending school.

These estimates were known to be high, however, because the villages included in the national sample were those having schools for both boys and girls. Actually, there are many villages in the rural areas that have only one school, usually for boys, or have no school at all. For example, in the Federal Capital Territory there are some 200 villages with schools deployed as follows:

44 Villages with both a boys school and a girls school.

51 Villages with a school for boys only.

14 Villages with a school for girls only.

91 Villages with no school.

In view of the deployment of schools among villages and the lack of reliable information about the extent of pupil participation, it seemed necessary to make a detailed and systematic study to obtain such information. Only with such information would it be possible to determine what increases in pupil participation are required and at what localities in order to achieve the goal of universalization of primary education.

Prototype District Selected.

While it was not feasible to carry out a nationwide school participation study with the resources immediately available, such an effort was to be en-

couraged. It appeared that one of the best means of encouraging such a nationwide study would be the completion of a study for one district. Such a districtwide study could then serve as a prototype or model for the completion of similar studies for every district in Pakistan. Moreover, while only one district would be completed, it could provide some clue for the level of participation one might expect to find nationally.

The Federal Capital Territory was selected as the district in which to conduct the pupil participation study. This included the city of Islamabad as well as the 200 villages scattered across some 34 census precincts.[2]

School Mapping Procedures.

The first step was to secure a large map of the entire Federal Capital Territory which showed the location of every village as well as transportation routes and topography. Next, all schools were located on the map with an appropriate symbol designating them as primary, middle, or high schools and whether they were boys schools, girls schools, or coeducational schools.

A third step was to obtain the latest census books on the area, in this case 1972, four volumes. Using the villages enumerated in each census precinct, it was then possible to sketch on the large map the boundary lines of every precinct.

School enrollments by sex were then obtained for every school and detailed data were gathered showing how many pupils were attending each school from which nearby villages.

Finally, detailed age-grade tables of the enrollments were gathered from a districtwide sample of some 20 boys schools and 20 girls schools. From this sample data, generic age-grade tables were compiled for rural schools of both sexes and for coeducational urban schools.

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[2] Shahid Iqbal and Jefferson N. Eastmond, School Mapping to Determine Levels of Pupil Participation in Primary Schools (Islamabad: BEPM, M/Education, Govt. of Pakistan, 1977).

In order to account for virtually every pupil and for every school-age child not in school, some upgrading had to be done on the census data. Two basic parameters were obtained from official government sources to upgrade the census. First, it was learned that 46 percent of Pakistan's total population was under the age of 15 years. This helped determine the number of youngsters at each school-eligible age. Second, it was found that Pakistan's population is growing at a rate of three percent annually. This permitted the projection of precinct census populations to coincide with current school enrollment information.

The census precinct was used as the basic computational unit for this study. Within the precinct, school enrollments were then deployed into an age-grade configuration for both boys and girls. Comparing these with the projected census counts of boys and girls at each age level, allowed the simple calculation of the percentage of the population participating in primary schools. This information was drawn into a map of each precinct and then these were compiled into headquarters area maps. Finally, a districtwide map showing all such information was developed.

One important procedural principle to follow in the mapping experience deserves special mention. It is imperative to maintain a close and constant liaison with District Supervisory and administrative staff members. This helped to clarify attendance discrepancies and village-to-village relationships. In the exercise, some schools were identified, which were not included on the official rosters and villages were found that had been completely omitted from the census.

Some Findings Related to School Participation.

Capital Territory estimated that the participation rate in the rural areas was about 51 percent for boys and 35 percent for girls. The school mapping-

participation study sharply revised these estimated downward to a participation rate of 35 percent for boys and only 13 percent for girls. It must be pointed out, however, that a change in definition of participation was made so that these figures are not exactly comparable.

Perhaps the best way to explain the differences is to present a summary of the data. This is shown in Table 1.

Table 1. PARTICIPATION RATES IN PRIMARY SCHOOLS IN THE FEDERAL CAPITAL TERRITORY BY SEX, 1977

	PERCENT PARTICIPATION IN PRIMARY SCHOOL AT AGE								
	5 yrs.	6 yrs	7 yrs	8 yrs	9 yrs	10 yrs	11 yrs	12 yrs.	Average of all ages.
Rural Boys	39%	64%	49%	30%	33%	27%	20%	18%	35%
Girls	13	23	17	17	11	10	5	10	13
City Boys	70	82	70	63	69	24	16	15	51
Girls	67	79	67	60	66	23	15	14	49
TOTAL Boys	47	69	55	39	43	26	19	17	39
Girls	28	38	31	29	26	14	8	11	23

Frequently the rate of pupil participation is expressed as the total school enrollment as a percentage of the school-going age group population. For a primary education system of five classes, this would normally include only the population group 5 + years through 9 + years. However, in Pakistan's primary schools a large percentage of the enrolled youngsters are age 10, 11, and 12. Therefore, the definition was felt to give a substantial distortion of the facts. It seemed that a more accurate definition would provide the percentage in school at every age and fix the level of participation as the average percentage participating at each class level. This is the method used at 35 percent for boys and 13 percent for girls. Participation in the city is

shown to be much higher at 51 percent for boys and 49 percent for girls.

Some generalizations from the school mapping participation study are (a) rural schools segregated according to sex have far less participation than do coeducational urban schools; (b) boys enjoy substantially more participation in the rural school than do girls; and (c) suburban—rural schools closer to the cities or large villages—obtain much higher rates of pupil participation than do the remote and isolated rural schools.

III. DEFINING SEQUENTIAL GOALS AND DETAILING STEPS FOR THEIR ACCOMPLISHMENT

The school mapping study determined the number of boys and girls of school-going age, pointed out which of these were attending which schools, and gave the location and ages of those not attending schools. Moreover, the mapping study shows the location of existing schools, and when this is seen in relationship to school locations, existing enrollments, and the locus of populations not participating in schools, it can serve as a useful tool in determining improvements of educational opportunity. Such information can be: (1) where campaigns should be launched to bring more students into existing schools to increase efficiency; (2) where existing boys or girls schools can be advantageously modified such as to be made coeducational; (3) where new schools of various types can be opened.

Model of a Planning Study:

Once again, a prototype study was done within the Federal Capital Territory in order to demonstrate the power and usefulness of such a planning process. In the study, the Government of Pakistan's Fifth Five Year Plan's target of universal primary school enrollment was taken as the goal. The Government of Pakistan defines universalization as an enrollment of 95% of the age-group boys and 66% of the age-group girls.

This overall five-year goal was to be achieved in three phases according to the Federal Territory Study. Phase I was to enroll 50% of the age-group boys and 35% of the girls. Phase II was to enroll 75% of the boys and 50% of the girls, and Phase II was to achieve the target of 95% of the boys and 66% of the girls.[3]

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[3] Shahid Iqbal and Jefferson N. Eastmond, A Sequential Development Plan for Achieving Universal Primary Education in the Federal Territory of Islamabad (Islamabad: Bureau of Educational Planning, 1977) pp 40.

It should be noted that complete plans were not generated in the study, because required resources and specific time lines were not included. Instead, the plans simply showed the sequence of the "whats" to be done and how these were to be accomplished to meet the objectives outlined in the three phases.

Findings and Conclusions:

Carrying out this systematic planning procedure provided definite guidelines and specific school projects to be completed in sequence. In the Federal Capital Territory the net results, in addition to the detailed plans, consisted of the following action to achieve Phase I:

1. Open 20 new schools (locations and enrollment specified).
2. Change 35 existing schools into coeducational schools (enrollment targets detailed for each).
3. Conduct enrollment campaigns in 49 school areas (target enrollments provided).

To achieve the targets of Phase II.

1. Open 26 new schools.
2. Change 19 existing schools into coeducational schools.
3. Conduct enrollment campaigns in 85 school areas.

And to achieve the targets of Phase III.

1. Open 29 new schools.
2. Change 23 existing schools into coeducational schools.
3. Conduct enrollment campaigns in 22 school areas.

The study recommends that such a planning exercise be completed for every district in Pakistan. Compiling such plans would then result in some excellent provincial plans and in an incomparable national plan for the systematic development of primary education.

Taking one step further, it would appear to be advantageous for donor nations or organizations to help fund the realization of these district-specific plans. Their sequential fulfillment would give a measure of accomplishment and accountability consistent with national goals. This has not as yet been even remotely accomplished.

IV. MONITORING EDUCATIONAL PROGRESS, THE TOOLS AND A BENCHMARK

Upgrading education, like any major task, requires systematic efforts to resolve its problems, expand its impact, and improve its quality. The sequence is simple and straight forward: (a) acquire the will or commitment; (b) determine the present status; (c) set goals and establish a plan; (d) execute the plan; and (e) monitor progress, evaluate and make corrections as needed.

The first four of the foregoing steps have been discussed and recommended in the preceding chapters. This chapter will discuss and make recommendations concerning the fifth and final step of monitoring progress.

Broader Objectives:

The basis for evaluation must be the objectives of the effort or enterprise. Up to this point we have linked objectives with the improvement and universalization of primary education. There is no question about the worth of these objectives, but it is held firmly that these are inadequate if they are sought in isolation. For example, if all efforts are focused on primary education to the total neglect of subsequent secondary education or the development of literacy and positive attitudes toward education in the same target areas, the adequacy of focusing only on primary education begins to pale. Further, suppose our sole effort remains on primary education while counteracting, unwholesome kinds of informal or nonformal education takes place outside the school. Or, that epidemics, malnutrition, and rampant disease remain unchecked, while the primary education effort goes on oblivious to the related, negating factors.

It is proposed, therefore, that the goals of universalization and improvement of primary education be retained, but that they be considered simultaneously with other broader, more encompassing goals of total development. Let us balance the primary education objectives with some additional objectives related

to the real "wealth" we seek to generate. Let us consider wealth as it is seen by the president of the World Bank:

> "What, after all, really constitutes wealth? And what more fundamental measures of wealth are there than the levels of nutrition, literacy, and health? It is in these terms that the average citizen of a developed nation enjoys wealth beyond the wildest dreams of the 1 billion people in the countries with per-capita incomes under $200; his caloric intake is 40 percent greater; his literacy rate is four times higher; the mortality rate of his children is 90 percent lower; and his own life expectancy 50 percent more. Are there any more basic terms in which to compare the wealth of the developed and developing nations?[4]

Let us then accept the premise that the wealth of a country, region, or village is closely related to the aggregate of the educated, healthy, dynamic human beings in relationship to their environment. Primary education can thus be seen as important but only as a part of life, only as a part of a day, for part of a few years, for part of the population. Let us then assess and monitor the progress toward the universalization of primary education within this broader concept of total human resources development.

The Tools for Monitoring Progress: There is an effective way to measure the total development human resources (wealth) and still carefully monitor what happens in the movement to upgrade primary education. The gross indicator of such an overall measurement is referred to as a G.P.E.[5] In addition to assessing the pupil levels of participation—the percentage of each age-group in attendance—in primary and other schools, it also obtains standardized measures on school factors such as:

The quality of the school buildings.

The relevance and effectiveness of the curriculum.

The kinds of teacher personnel and administration.

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[4]Robert S. McNamara, Speech to Board of Governors, Christian Science Monitor, 1 October, 1974.

[5]Jefferson N. Eastmond, A Gross Product of Education as a Practical Tool in Country and Community Development (Islamabad: Bureau of Educational Planning, 1977) 52 pp.

In addition to the school factors, however, it monitors the status of the vital factors within the community which influence the development of human resources, such as:

The health, motivation and attitudes toward education.

The dynamics of community development--joint efforts.

The levels of literacy and the nonformal and informal education activities.

The resources and jurisdictional management.

The G.P.E. integrates all of the foregoing measures into one overall assessment or indicator. It makes possible the analysis of any participator sector, such as formal primary education, but offers the opportunity to see this within the perspective of total development.

Benchmark Measures Available: As a beginning and as a reference point, the GPE for 1976 has been calculated for more than 400 villages, for half the districts and all the provinces and areas, and for the entire nation of Pakistan.[6] Such calculations provide a benchmark assessment of developed human resources. Subsequent calculations, therefore, can provide measures of progress of overall development or of any constituent factor (i.e., participation, buildings, non-formal education, etc.).

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[6] Loc. Cit.

V. RESEARCH GUIDELINES FOR UPGRADING RURAL PRIMARY EDUCATION

A great deal of research has been carried out in recent months in order to find out the best ways of improving Pakistan schools. Some indepth studies have been conducted in selected villages. A nation-wide effort was made to collect and analyze extensive interview and observation data from a sampling of hundreds of villages. A series of village experiments have been launched in order to observe how village schools can best increase male and female enrollments and then hold these youngsters in school. In addition, a large number of studies have been launched in the various provinces by colleges and university faculty members and departments. The culmination of all of this completed research and the initial findings of the studies underway reveal some startling conclusions with respect to the expenditure of money for Pakistan's rural village schools.

Is the Expenditure of More Money the Answer?

From a review of how expenditures are made for primary schools in Pakistan, it can be concluded with confidence that doubling or tripling the expenditures as funds are currently spent would make no difference in the attendance of pupils or in the holding power of the schools. Thus, spending more money on primary schools in the ways it is currently spent will provide no measurable improvements as far as pupil attendance is concerned. For emphasis, this point needs to be made again and surely significant improvements need to be made.

Nevertheless, the author can assert unequivocally that if expenditures for primary education in Pakistan were doubled, or even tripled and expended in the present patterns, the improvements--the measurable increased learning and impact on more learners--would be practically negligible. Building more school buildings on present designs and locating them as they presently are awarded, and training more teachers of the kinds presently prepared, and raising substantially the salaries of educational personnel will not suffice. These kinds of efforts are only indirectly related to the overriding problems of primary education. They are not cost-effective solutions.

What then are the solutions? The response again is that there are many solutions and that empirical research and carefully conducted experiments can give the solutions. Some are now available.

The Purpose and Spirit of Research: As defined herein, research is a systematic, objective effort to solve problems on the basis of empirical evidence. In its best forms it follows the scientific method in its pursuit of truth, and postulates that the findings can be verified by anyone who wants to replicate the procedures. It acknowledges errors and chance variability, and builds conclusions on levels of confidence related to laws of probability. It is not dogmatic, and submits conclusions as temporarily best thus acknowledging that better theory, better instruments and procedures, and better researchers will eventually bring forth better results and more conclusions that will override those currently held.

Research and experimentation are by definition pragmatic. That is, if they solve the problems being addressed, they are successful. If not, they are failures. However, the purposes are broad, and failures in research may give new insights, may provide valuable experiences for those involved, and while not completely solving a problem, may render partial solutions.

Current Research and Experimentation: The 1976-77 research efforts in primary education have given rise to a large number of studies carried out by individual researchers and institutions throughout Pakistan. In addition, a variety of educational experiments were inaugurated in more than a dozen different villages located in different parts of the country.[7] The remainder of this chapter will attempt to cite the research and experimentation currently completed or underway as related to a variety of topics or problem areas in primary education. In addition some suggestions for further research and needed experimentation are submitted. The following topics are presented roughly in the sequence of their importance. That is, those presented first are assumed, on the basis of present evidence, to have a greater influence on upgrading rural primary schools. Those following, in descending order, have decreasing importance.

A. FEMALE EDUCATION AND PUPIL ATTENDANCE:

A major problem in rural Pakistan is the lack of primary school attendance, particularly among females. The most recent estimates, cited herein, are that about 35 percent of the boys are attending while less than 15 percent of rural girls attend school.

Research Completed or Underway, 1977: The major focus of the nationwide collection and analysis of rural primary school data was on dropout and non-attendance.

Correlations were run between attendance and a dozen other factors to find significant relationships. Interviews with parents, teachers, and dropouts, together with teacher and outside facilitator judgments, extensively documented the reasons for pupil dropout. These correlations and reasons for dropout according to sex, district and source of expression were reported in the national study

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[7] For a description of the overall research design and the various village experiments, see Jefferson N. Eastmond, Primary Education in the Rural Villages of Pakistan. (Islamabad: Bureau of Educational Planning & Management, 1977) 2 Vol.

by Eastmond.[8] A similar study using essentially the same instruments and procedures, has been conducted in three districts of the Punjab by the Institute for Education and Research (IER), Lahore.[9] While the national study on primary education collected data on the distribution of various age pupils by class level (age-grade information), the information on pupil retention and non-promotion was not obtained. Consequently, the I.E.R. in Hyderabad is conducting a study to collect such retention information and then describe pupil progress in the rural schools.[10]

One of the most important dimensions of the national study as a "collapsed longitudinal research design" to identify the differences in characteristics between dropout youngsters and those who stay in school. This was carried out with matched pairs of each sex and at each class level. It entailed some 20 interviews in each of the more than 400 villages. The national study reported that the differences between dropouts and stay-ins were so marked, so consistent, and so highly significant, statistically, as to be suspect. In an attempt to confirm or repudiate the matched pair findings, the I.E.R., Lahore, selected new villages, used carefully supervised, trained interviewers in carrying out the same schedules. The preliminary results from these studies, one on family factors,[11] and the other on school factors,[12] generally confirms the findings of the national study.

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[8] Loc. Cit.

[9] Anwar Hussain, Dropouts in the Primary Schools of the Punjab (Lahore: Institute for Education and Research, University of the Punjab, 1977).

[10] Institute of Education and Research, Pupil Progress and Retention in Rural Primary Schools (Hyderabad: University of the Sind, 1977.

[11] Tahir Baig, Family Factors and School Opportunities (Lahore: I.E.R., University of the Punjab, 1977).

[12] Monawer Mirza, Differences in the School Factors of Stay-ins and Dropouts in Rural Primary Schools of Pakistan (Lahore: I.E.R., University of the Punjab, 1977).

An additional study is underway that is attempting to define the essential characteristics of education that are successful for rural female children. This research is being done by the I.E.R., Hyderabad.[13]

Another major research effort into the attitudes of rural women and how they spend their time is currently being completed by the National Institute of Educational Psychology.[14] This is a nationwide research effort in an attempt to discover ways to motivate villagers to help their children more fully participate in primary education.

B. PARTICIPATORY PLANNING WITH THE USE OF SCHOOL MAPPING:

Determining the level of pupil participation in the primary schools of each district is the crucially needed first step to be taken in achieving universalization of primary education in Pakistan. Fortunately, census data, enrollment information, age-grade distribution charts, and adequate maps are available for every area of the country. What is desperately needed now is for every district to complete a school mapping exercise to determine the levels of pupil participation in primary schools. The mapping exercise gives an accurate description of the present status and thus provides a measure of specifically what has to be done, to what extent, and where in order to achieve the objective of universal opportunity for primary education. Using this

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[13] Institute of Education and Research, Specifications for Successful Female Education in Rural Pakistan (Hyderabad, I.E.R., University of the Sind, 1977).

[14] Iftikhar Hassan and staff, Female Attitudes and Use of Time in Pakistan Villages (Islamabad: National Institute of Educational Psychology, 1977).

exercise as a base, Chapter III, pointed out the procedures for developing a sequential plan of primary education goals for the jurisdiction under consideration. Prototype studies of these were carried out in the Federal Capital Territory.

It should be noted that the sequential planning exercise dealt only with the "what's" to be accomplished. Carrying the procedure further to maximize the effectiveness of the planning and the execution of the plan will advantageously involve the affected villages in the process. This participatory planning model was carried out successfully in four villages of different types within the Federal Capital Territory.[15] In each village involved with the model, widespread villager participation with educator leadership was able to develop detailed plans of educational development for a five-year period.

Needed Research: The school mapping participation and sequential planning studies should be carried out in every district and consolidated into provincial plans.

The use of the participatory planning model was stopped temporarily after the various village plans had been developed. All communication regarding their plans was terminated for a six-month period. It was expected that the villages would carry out their plans independently, but this did not occur. Additional research and experimentation are needed to find the ingredients that will assure not only the planning, but also the essential follow-through to execute the plans successfully.

Recommended Experimentation: As school mapping participation studies are completed and sequential and participatory plans are developed, a series of experiments should be conducted on how best to channel external resources into the

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[15] Khalid Bokhari and Eastmond, A Participatory Planning Model for Village Education in Pakistan (Islamabad, Bureau of Educational Planning, 1977) 24 pp.

areas in order to fulfill the plans. Different types of incentives or matching patterns could be tested. Restricting external resources to technical assistance and commodities not locally available holds promise if it can maximize the local contributions of labor and available materials.

C. VILLAGE ATTITUDES AND ENVIRONS:

The national study on rural primary education found such factors as negative parent attitude, poor health, and loss of pupil interest to be frequently mentioned as the major causes for pupil nonattendance. Some followup studies with more depth were needed.

Research Completed or Underway:

A considerable amount of information was gathered in the national study that related to village attitudes toward education, pupil ability, health, nutrition, and environmented quality of the village. These measures of personal and village dynamics were analyzed further in their specific relationships to pupil attendance.[16]

Another attempt to identify and describe attitudes of village women has been completed by the National Institute of Educational Psychology.[17] This study attempted an indepth probe into the many reasons for dropout, etc. It also attempted to discover avenues for meeting these needs.

In an attempt to describe the amount and variety of nonformal and informal education taking place in Pakistan villages, another study has made a detailed analysis and summary of such information as it was gathered in the national study.[18]

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[16] Safia Yousaf, Village Attitudes and Environs (Islamabad, Bureau of Educational Planning, 1977) 45 pp.

[17] Iftikar Hassan, Op Cit.

[18] Abdullah Khadim Hussain, Nonformal and Informal Education in the Villages of Pakistan (Islamabad: Bureau of Educational Planning, 1977).

Experiments Inaugurated:

Some very modest attempts were made in some eight villages (3 in Punjab and 5 in Federal Territory) to introduce some kind of adult education or parent orientation in an attempt to build positive attitudes toward schools and education. No formal outline of instruction was provided and the instructors were local villagers who received no training for the assignment. In most of these villages the attraction for the classes was the teaching of skills such as sewing, handicrafts or literacy. The success and enthusiasm for such programs seemed to be more with the female than the male populations.

Meager attempts were made in three villages of the Federal Territory to introduce school health and first aid units. The villagers were keen to try out such attempts to improve local health conditions and in most instances a local volunteer dispenser was recruited to assist on a part-time basis.

Needed Research:

The areas of adult education and informal and nonformal education methods of changing villager attitudes towards schools and education appear to need a great deal of research and experimentation. In Pakistan not only must the role of the Ministry of Education be clarified in the programs of adult education, but what to teach, how to teach it, materials to use, and who is to do the teaching are all virtually unknown items. The basic research needs to be done, policies enacted, and experimental try-outs and evaluations are imperatives.

Recommended Experimentation:

Aside from the needed experimentation required to get effective programs underway of education that will change adult attitudes, there remains the undefined role of the school in matters of pupil and village health. There is a need to experiment with school health programs that call for cooperative relationships between the ministries of health, education, IRDP, etc. In addition, the possibilities of assessing the effectiveness in attitude changes various

types of informal and nonformal education efforts within the villages offers a wide range of fruitful experimentation.

D. EDUCATIONAL MANAGEMENT AND SUPERVISION:

It is difficult to overstress the importance of management and supervision in the upgrading of primary education. It is an important dimension of virtually every aspect of educational activity.

Research Completed or Undersay, 1977:

In the 1976 national collection of data, a considerable amount of information was obtained on the characteristics of local school administrators and their work. One study is underway which will summarize and make an analysis of these characteristics.[19]

On the provincial level, a management study is being done in the Punjab.[20] It is comprehensive in the range of topics to be covered and is being conducted by two top-level educational administrators, male and female, with long and rich experiences in educational management.

Experiments Inaugurated:

On the district level, an experiment was launched to improve the supervision of rural schools in Karachi. An agreed upon minimum standard of one supervisory visit each month was adopted. The male supervisors were already already meeting this standard, but the female supervisors fell far short. By reallocating schools to be supervised and better coordinating the efforts of individual supervisors, the experiment was launched to meet the defined standards.

In some eight villages located in the Sind, N.W.F.P., and the Punjab, various experiments were launched that called for closer cooperation and sharing

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[19] G.M. Shah, Characteristics of Administrators in the Rural Schools of Pakistan (Islamabad: B.E.P., 1977).

[20] Feroza Yasmin and M. Kasmi, School Management in the Punjab (Islamabad: Bureau of Educational Planning, 1977).

of responsibilities between the male and female district education officers and their assistants.

A cluster of villages in the Federal Capital Territory were selected for a diverse pattern of primary school experimentation. One component of their experiments was the assigning of one headmaster of a primary-middle school to supervise and provide administrative support and inservice training to the teachers in the schools of the other four nearby villages.

Needed Research:

The management studies currently being completed will undoubtedly serve as good beginnings. However, there is a need to expand both studies in terms of depth and to conduct studies in other provinces which could follow the general outlines of the management study of the Punjab.

Other levels of educational management need to be researched. This could profitably focus on the federal level and perhaps at the markaz level where some experimental programs are being inaugurated.

Recommended Experimentation:

Pakistan's laws provide for institutional councils at the local and intermediate levels of administration. Some promising experiments could be launched in making schools and their administration a responsibility of these councils. Such local accountability may be the key to significant improvements in rural primary schools.

Virtually every investigation of educational supervision of Pakistan's rural primary schools has pointed out gross deficiencies. Most of the inadequacies are related to competencies of supervisory personnel and their ability to regularly visit their assigned schools for profitable supervision. There are a large number of options dealing with transportation, residence, inservice training, redefinition of responsibilities, etc., that hold great promise for successful experimentation to discover effective new patterns of supervisory service.

E. THE LEARNING ENVIRONMENT:

Pakistan's Ministry of Education has recognized the importance of the curriculum and has established a separate Curriculum Wing. Under the direction of this Wing, a "new curriculum" has been developed and is still being fully implemented nationwide. The primary schools were the first to get the new curriculum. The scope of the task has been enormous with new textbooks, learning kits, and other instuctional supplies to be written, produced and distributed. Special inservice training centers have been set up to assist in orienting tens of thousands of teachers to the elements of the new curriculum. The implementation process is continuing and will likely do so for years.

Research Completed or Underway, 1977:

Under the aegis of the Curriculum Wing and its related bureaus in the various provinces, a sustained program of research and evaluation is carried out. There have been joint meetings of the Bureau of Educational Planning with various sectors, bureaus, and training centers of the Curriculum Wing in attempts to share plans, coordinate efforts, and exchange reserach publications and findings. The various research and evaluation studies of the Curriculum Wing, however, are not included herein, neither in this section nor in the subsequent one concerning teachers.

In the nationwide collection of data, quality scores—comprised of a number of curriculum observations—were obtained on the learning environment of more than 800 schools. No significant coordination was found between these scores and pupil attendance. However, the analysis of these data, supplemented with additional information will be published as descriptive studies from two sources. The first is being completed in Islamabad,[21] and the second in Karachi.[22]

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[21] Khan Mohammad, The Learning Environment in the Rural Schools of Pakistan (Islamabad: Bureau of Educational Planning, 1977).

[22] Zafar Hussain, The Curriculum in the Primary Schools of Rural Pakistan (Karachi: Government College for Teachers, 1977).

Similarly, a large amount of data were collected nationwide on the implementation aspects and perceived effectiveness of the "new curriculum". These data are being analyzed and reported by the Curriculum Research and Development Center in Lahore.[23]

Experimentation Inaugurated:

A number of experiments were launched in an attempt to try out curriculum innovations and assess their acceptance and effectiveness. In seven villages, simply supplying books, writing materials, sports equipment, and other curriculum materials for enrichment was the innovation. In six villages supplementary crafts and skills were introduced into the curriculum by providing tools and sewing machines using locally available teacher aides to implement these new programs.

One of the most promising innovations that was met with considerable enthusiasm was the beginning of a school project that would generate resources for school use as well as provide an enrichment in instruction. Seven villages began school projects. The most popular projects appeared to be sewing and handicrafts in the girls' schools. In the boys' schools the furniture finishing projects seemed to take hold readily. Other projects included school gardens, poultry farm, soap making, and weaving.

Another experiment included a revolving library among a cluster of four villages, which consisted of four boxes full of a wide variety of easy reading, entertaining books that were rotated every three months to different villages within the cluster.

In one village a program of religious instruction was begun in an attempt to enrich the existing curriculum and obtain parent support to attract and hold more youngsters in school.

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[23] R. Rafiq, The Impact of the New Curriculum on Rural Primary Education (Lahore: Curriculum Research & Development Center, 1977).

Needed Research:

While the national collection of data gave proficiency tests to ascertain levels of basic skills (reading, writing, math, etc.), the tests were very brief and lacked the kind of depth and scope of items needed for standardization. The I.E.R., Lahore is currently starting research into achievement testing. This effort to develop proficiency and achievement tests in terms of the available theory and experience of other countries should be encouraged.

The development of standardized tests will open up an entire range of needed research for evaluating various sectors of the curriculum, assessing the effectiveness of promotion policies, etc.

Recommended Experimentation:

A wide variety of experiments should be encouraged in connection with improving the learning environment. These should include the try out of new instructional methods and materials, beyond those associated with the "new curriculum".

With the development of good standardized tests, alternative school programs can be developed to bring in work experience, flexible vacations, etc. in new ways to develop pupil competencies. In addition, the most effective patterns of external funding of education are those that by-pass all of the means, such as buildings, teacher training, production of curriculum materials, etc., and arrange the payoff on the ultimate objective: on the number of well-educated students produced. Experimentation with this pattern of funding holds tremendous promise for upgrading primary education.

F. TEACHER PERSONNEL:

In the nationwide collection of data, a number of measures were obtained on teacher personnel and administration. Some of these items were grouped together to constitute a kind of quality score on personnel. Many others defined the characteristics of teachers, their opinions, and the nature of their work.

Research Completed or Underway, 1977:

No significant correlation was found between personnel and administration scores on the one hand and pupil attendance on the other.[24] The descriptive measures were supplemented and confirmed with additional local data and then written up by the I.E.R., Lahore.[25] A similar study using supplementary data from the Sind is being done by the Government College of Education in Karachi.[26]

Another study has been completed that deals with the attitudes and perceptions of rural primary school teachers.[27] This study encompasses a range of topics dealing with teaching load, supervision, transportation, housing, assessment of preservice and inservice training, etc.

A series of creative and crucially important studies is being conducted by the I.E.R., Hyderabad. The approach is to define the characteristics of the kind of learning environment that must be provided to primary schools.[28] After this has been defined, then the type of teachers and the knowledge, attitudes, and skills they must possess will be delineated.

Thus, the most suitable types of personnel can then be recruited and trained in order to provide stability and effective teaching in the rural primary schools for girls.[29] Subsequent to the delineation of successful teaching

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[24] Jefferson N. Eastmond, Primary Education in the Rural Villages of Pakistan, Op. Cit., Appendix.

[25] Nasim Shaukat, Characteristics of Primary Teachers (Lahore: Institute of Education and Research, University of the Punjab, 1977).

[26] Khwaja Manzoor, Characteristics of Primary School Teachers in Rural Pakistan with Particular References to the Sind: (Karachi, 1977).

[27] Abdul Ghafoor, Perceived Characteristics of Primary Schools Teachers (Islamabad: B.E.P., 1977).

[28] Institute for Education and Research, Specifications for Successful Female Teachers for Rural Primary Schools (Hyd. IER, 1977).

[29] Institute of Education and Research, Characteristics of Successful Teachers for Rural Primary Schools (Hyderabad: I.E.R., 1977).

skills, attitudes, and personal traits, an inservice and preservice training program will be designed.[30]

Experiments Inaugurated:

In attempts to provide improved teaching service in rural schools, experiments using paraprofessional teacher aides were carried out in five villages (one in N.W.F.P., Punjab, Sind, and two in the Federal Capital Territory). These aides were mature women from the local village who had a primary education and could teach handicrafts, sewing, gardening or other skills. These aides were to be able to keep the school open for some type of instruction in the event the regular teacher was absent. In each case, satisfactory candidates were found and villagers' acceptance of the program was favorable.

An interesting experiment to provide female teachers to rural schools by a centrally located hostel is being conducted in Mastung, Paluchistan. The experiment is funded by UNESCO. The cost-effectiveness of the preliminary results are somewhat disappointing, but this type of experimentation holds considerable promise for upgrading primary education.

Needed Research:

There is much valuable research to be done in connection with teacher personnel in all parts of Pakistan. This covers the broad areas of recruitment of candidates, preservice education, assignments and transfers, tenure, professional development through inservice training and supervision, compensation patterns to get the right teachers at the right places for service, etc. In each of these areas many answers are needed. The research is crucial to upgrading primary education.

Research is also needed in the alternative kinds of staffing arrangements. This would include the same kinds of information for teacher aides as is needed

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[30] Institute of Education Research, Training Teachers for Rural Pakistan: Critique & Recommendations (Hyderabad: IER, Univ. of Sind, 1977).

for teachers. Other innovations such as team teaching of various types should be explored for possible solutions to the teachers' problems of rural primary schools.

Recommended Experimentation:

Considerable more experimentation should be carried out with respect to more effective ways of using existing teacher personnel. Much can be done in the way of better assignment, consistent supervision, incentive pay for hardship posts, awards for distinguished service, etc.

One of the many promising experiments in connection with assignment appears to be an adaptation of the Mastung teacher hostel. One way to increase the cost-effectiveness and attractiveness of this innovation might well be the joint use of such hostels by other professional women of comparable status. Thus village health specialists, etc. that might be assigned to the same geographical area, could maximize the use of the hostel, transportation support, etc.

More experimentation could advantageously be carried out in ways of extending the influence of existing teachers. This entails the use of teacher aides, tutors, volunteer parents, team teaching, sharing specialized teachers among a cluster of villages, etc.

Despite the existing preservice training and the massive inservice programs currently underway in some provinces, many opportunities remain for more promising patterns of recruitments, preservice, and inservice training of teachers. This also applies to teacher aides, volunteers, tutors, etc.

G. SCHOOL BUILDINGS:

One of the most promising areas for productive research and experimentation in Pakistan is in the area of school buildings. This covers building design, construction, utilization, remodeling, site improvement, equipment, and other related topics. The research possibilities are exciting because the existing designs, construction practices, utilization, etc., are so obviously deficient and

yet the costs and needs for expansion are of such magnitude as to claim a high priority.

Research Completed or Underway, 1977:

From the nationwide collection of village data it was found that the lack of school buildings was a cause for nonattendance (Rank 5), particularly for girls when no separate facility was available. Another aspect of this problem was investigated; namely, does the quality or goodness of a school building and physical facilities have any effect on pupil attendance? The answer to this question had to go beyond mere opinion. Therefore, in addition to the opinions or judgmental causes of dropout, some empirical relationships were explored. A table of the nationwide correlations was developed. Nationwide, the quality of the school building and facilities was found to have no significant relationship to pupil attendance.

Using the detailed elements of the school building quality scores, a descriptive study of existing rural school buildings has been completed by the B.E.P.[31]

A similar type of study is underway in Karachi with emphasis on school buildings in the Sind.[32]

A detailed investigation of the characteristics of school buildings related to pupil attendance is being made in the Federal Capital Territory.[33] In addition to the correlations of buildings with pupil attendance on the village basis, this study makes the analysis separately for boys' schools and girls' schools. Moreover, it traces enrollment changes that occurred after the construction of every new primary school constructed in the Federal Territory. This

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[31] Farhat Hussain and Jefferson N. Eastmond, School Buildings in Rural Pakistan (Islamabad: B.E.P., 1977) 19 pp.

[32] S. Aley Hadar, Characteristics of Primary School Buildings in Pakistan (Karachi: Government College of Education, 1977).

[33] Kalim A. Siddiqui and Saeedullah Shah, Anthropomorphic Data for Students in Pakistan (Islamabad: Bureau of Educational Planning, 1976) 23 pp.

longitudinal approach also revealed no significant difference in attendance because of improvements in school facilities.

In an attempt to explore radically different school building designs, a study has been compiled by the B.E.P. and earlier work by the National College of Arts in Lahore.[34] This study was compiled to serve as a sourcebook for further design and construction of schools in every geographic part of the country. It attempts to synthesize the appropriate architectural treatments with the use of local materials and locally available skills and workmanship. Many illustrations are given.

A study of the anthropomorphic measures of Pakistan pupils as a basis of better school building design has been published by the B.E.P.[35] This too, is a good source book for the design and construction of primary schools.

Experiments Inaugurated:

As a part of the experiments to double and triple boys and girls enrollments, respectively, a number of temporary sheds and lean-to's were constructed in seven villages. In most cases these simply replicated the kinds of structures the villagers had already constructed for the schools. Teachers, villagers and pupils seemed pleased with the additional facilities which were functional, but extremely inexpensive.

In half-dozen other villages, minor remodeling was done or additions to the buildings were provided in the form of boundary walls, latrines, or site clearance or leveling. In virtually all cases, the villagers and/or the teachers and pupils themselves were able to make the additions successfully.

In two villages, because of a lack in available school buildings, arrangements were made to use a nearby mosque as a school facility.

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[34] Kalim A. Siddiqui, Saeedullah Shah, Jefferson N. Eastmond and the faculty of the National College of Arts, Design Considerations for Construction of Rural Primary Schools (Islamabad: Bureau of Educational Planning, 1977) 143 pp.

[35] Kalim A. Siddiqui and Saeedullah Shah, Anthropometric Data for Students in Pakistan (Islamabad: Bureau of Educational Planning and Management, 1976) 23 pp.

In one village that had a coeducational school but no school building, arrangements were made to construct an experimental school building for Rs.3,500. Plans were agreed upon and local labor was available. The work was halted, however, because of national elections.

Needed Research:

There are literally dozens of major, important studies that need to be done on schools buildings in Pakistan. While there is no apparent relationship between the quality of school buildings and pupil attendance at present, this becomes a challenge so that such a relationship does exist. This can be a positive factor in improving pupil attendance and retention. The range of needed studies cuts across such topics as (a) site selection and improvement, (b) site and building utilization, (c) construction techniques and materials, (d) maintenance and operation practices, (e) free or inexpensive equipment, (f) seasonal implications for easy building modification, or mobility, (g) guidelines for remodeling school buildings, (h) easy building and site improvements that can be made by teachers and pupils, etc., etc., etc.

Recommended Experimentation:

For virtually every aspect of the research needed, there is a subsequent need to try out the recommended changes and evaluate them.

Pilot types of buildings should be built, their actual construction and maintenance costs recorded, and their impact on pupil attendance and learning should be ascertained.

APPENDIX: A ROSTER OF THE STUDIES COMPLETED OR UNDERWAY IN 1977 IN CONNECTION WITH THE PRIMARY EDUCATION RESEARCH PROJECT

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1. Paul O. Farrell, Thoughts on the Present State and Future Development of Primary Education in Pakistan, (Islamabad: USAID, Mimeographed, March, 1977) 24 pp.

2. Shahid Iqbal and Jefferson N. Eastmond, School Mapping to Determine Levels of Pupil Participation in Primary Schools, (Islamabad: BEPM, M/Education, Govt. of Pakistan, 1977) - pp.

3. Shahid Iqbal and Jefferson N. Eastmond, A Sequential Development Plan for Achieving Universal Primary Education in the Federal Territory of Islamabad, (Islamabad: Bureau of Educational Planning, 1977) 40 pp.

4. Jefferson N. Eastmond, A Gross Product of Education as a Practical Tool in Country and Community Development, (Islamabad: Bureau of Education Planning, 1977) 52 pp.

5. Jefferson N. Eastmond, Primary Education in the Rural Villages of Pakistan, (Islamabad: BEPM, 1977) 2 volumes.

6. Anwar Hussain, Dropouts in the Primary Schools of the Punjab, (Lahore: I.E.R., University of the Punjab, 1977).

7. Institute of Education and Research, Pupil Progress and Retention in Rural Primary Schools, (Hyderabad: University of Sind, 1977).

8. Tahir Baig, Family Factors and School Opportunities, (Lahore: I.E.R., University of the Punjab, 1977).

9. Monawer Mirza, Differences in the School Factors of Stay-Ins and Dropouts in Rural Primary Schools of Pakistan, (Lahore: I.E.R., University of the Punjab, 1977).

10. Institute of Education and Research, Specifications for Successful Female Education in Rural Pakistan, (Hyderabad, I.E.R., University of the Sind, 1977).

11. Iftikhar Hassan and staff, Female Attitudes and Use of Time in Pakistan Villages, (Islamabad: National Institute of Educational Psychology, 1977).

12. Iftikhar Hassan, Surriya Jabin, and Shaheen Chowdhri, Socio-Cultural Variables of the Dropout Syndrome in Rural Primary Schools of Pakistan, (Islamabad: National Institute of Psychology, 1977) 6 pp.

13. Khalid Bokhari and Eastmond, A Participatory Planning Model for Village Education in Pakistan, (Islamabad: BEIM, 1977) 24 pp.

14. Safia Yousaf, Village Attitudes and Environs, (Islamabad: Bureau of Educational Planning, 1977).

15. Abdullah Khadim Hussain, Nonformal and Informal Education in the Villages of Pakistan, (Islamabad: Bureau of Educational Planning, 1977).

16. G. M. Shah, Characteristics of Administrators in the Rural Schools of Pakistan, (Islamabad: BEPM, 1977).